

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

IN THE CLAIMS:

1. (Currently Amended) An internal combustion engine comprising:
a combustion chamber;
first and second inlet valves controlling flow of air into the combustion chamber;
first and second exhaust valves controlling flow of combusted gases out of the combustion chamber; and
first and second turbo-chargers; wherein:
the first turbo-charger is connected to the first inlet valve and the second turbo-charger is connected to the second inlet valve;
charge air supplied to the combustion chamber via the first inlet valve is pressurised only by the first turbo-charger;
charge air supplied to the combustion chamber via the second inlet valve is pressurised only by the second turbo-charger;
the first turbo-charger is connected to the first exhaust valve and receives only combusted gases expelled via the first exhaust valve;
the second turbo-charger is connected to the second exhaust valve and all combusted gases expelled via the second exhaust valve flow to the second turbo-charger without passing through the first turbo-charger; and
a valve operating means for controlling operation of the first inlet valve and first exhaust valve independently from the operation of the second inlet valve and second exhaust valve thereby providing variation in the ratio of the mass of charge air supplied to the combustion chamber via the first inlet valve to the mass of charge air supplied to the combustion chamber via the second inlet valve, wherein [such] said valve operating means [is capable of] for operating in different modes of operations, including:

a first operating mode in which the [the] second inlet valve and the second exhaust valve are deactivated whereby all charge air supplied to the combustion chamber is pressurised by the first turbo-charger and delivered via the first inlet valve;

a second operating mode in which the [the] first and second inlet valves and the first and second exhaust valves operate simultaneously whereby charge air supplied to the combustion chamber is pressurised by both of the first and second turbo-chargers and delivered via both the first and second inlet valves; and

a third operating mode in which the [the] first inlet valve and the first exhaust valve are deactivated whereby all charge air supplied to the combustion chamber is pressurised by the second turbo-charger and delivered via the second inlet valve.

2. (Cancelled).

3. (Previously Presented) An internal combustion engine as claimed in claim 1 wherein combusted gases leaving each of the first and second turbo-chargers are relayed to exhaust without passing through the other turbo-charger.

4. (Previously Presented) An internal combustion engine as claimed in claim 1 wherein the first inlet valve is associated with a first inlet port which imparts to charge air flowing therethrough a flow characteristic different to a flow characteristic imparted to charge air flowing through a second inlet port associated with the second inlet valve.

5. (Previously Presented) An internal combustion engine as claimed in claim 3 wherein the first inlet port imparts to the charge air flowing therethrough a degree of swirl greater than the degree of swirl imparted to charge air flowing through the second inlet port.

6. (Previously Presented) An internal combustion engine as claimed in claim 1 comprising a first intercooler for cooling air pressurised by the first turbo-charger before the air flows into the combustion chamber via the first inlet valve and a second intercooler for cooling air pressurised by the second turbo-charger before the air flows into the combustion chamber via the second inlet valve.

7. (Previously Presented) An internal combustion engine as claimed in claim 1 wherein the first turbo-charger is a low pressure turbo-charger and the second turbo-charger is a high pressure turbo-charger.

8. (Previously Presented) An internal combustion engine as claimed in claim 7 wherein the valve operating means increases flow of exhaust gas to the high pressure turbo-charger and thereby air flow through the high pressure turbo-charger to the second inlet valve during periods of acceleration of the engine.

9. (Previously Presented) An internal combustion engine as claimed in claim 7 wherein the valve operating increases flow of exhaust gas to the high pressure turbo-charger with increasing engine speed and thereby flow of charge air through the high pressure turbo-charger to the second inlet valve.

10. (Currently Amended) An internal combustion engine as claimed in claim 1 wherein the valve operating means comprises an electro-hydraulic actuator individual to each inlet valve and each exhaust valve and controlled by [the] an electrical controller.

11. (Previously Presented) An internal combustion engine as claimed in claim 3 wherein the first turbo-charger is a low pressure turbo-charger and the second turbo-charger is a high pressure turbo-charger.